

Statement of Basis of the Federal Operating Permit

Ticona Polymers, Inc.

Site Name: Bishop Facility
Area Name: SH/TO/TF Unit
Physical Location: 5738 County Road 4
Nearest City: Bishop
County: Nueces

Permit Number: O2017
Project Type: Minor Revision

Standard Industrial Classification (SIC) Code: 2869
SIC Name: Industrial Organic Chemicals

This Statement of Basis sets forth the legal and factual basis for the draft changes to the permit conditions resulting from the minor revision project in accordance with 30 TAC §122.201(a)(4). The applicant has submitted an application for a minor permit revision per §§ 122.215-217. This document may include the following information:

- A description of the facility/area process description;
- A description of the revision project;
- A basis for applying permit shields;
- A list of the federal regulatory applicability determinations;
- A table listing the determination of applicable requirements;
- A list of the New Source Review Requirements;
- The rationale for periodic monitoring methods selected;
- The rationale for compliance assurance methods selected;
- A compliance status; and
- A list of available unit attribute forms.

Prepared on: January 19, 2017

Operating Permit Basis of Determination

Description of Revisions

Special Terms & Conditions have been updated. GRP-VENTS4 has been added with applicability under 30 TAC Chapter 115, Vent Gas Controls. PBR §106.124 has been added to authorize new Pilot Plant vents (GRP-VENTS4). PBR §106.371 has been added to authorize a new cooling tower. PBR §106.472 has been added to authorize two new storage tanks.

Permit Area Process Description

Trioxane (TO) Process

- 1) Concentration: of Formaldehyde (HCHO) from about 50-55% by weight in water to about 60-76%.
- 2) Reaction: of the concentrated HCHO in the presence of catalyst to produce Trioxane.
- 3) Extraction: of the Trioxane from the water and unreacted HCHO, using Benzene.
- 4) Finishing: by recovering Benzene and other "light ends" by distillation, and by concentrating Trioxane and removing "heavy ends" by distillation, to a level of purity greater than 99.9%.
- 5) Recovery: removes water and impurities from the recovery stream.

Solution Hydrolysis (SH) / Celcon Tank Farm (TF) Process

The SH-1 Unit consists of the Celcon Tank Farm, Methanol Recovery area and the Polymer area. Various chemicals, Formaldehyde, Ethylene Glycol, Benzene and Caustic are used in the TO-2 unit and Methanol, Triethylamine, Dioxolane and Methylal are used in the SH-1 process. The chemicals are received by truck, railcar, or piped from other units in the plant. Methanol is piped from the MS unit and is transferred as needed to the Celcon Tank Farm. Formaldehyde is piped from the MO units. The Methanol Recovery Towers recover the Methanol that is returned to the Celcon Tank Farm from the Polymer unit. The Methanol is distilled and separated from the other chemicals. The chemicals in the base are pumped to the TO-2 unit for recovery.

The Polymer unit makes Celcon®, an acetal co-polymer produced from Trioxane and Dioxolane monomers. The monomers are fed into a reactor and reaction initiated using Boron Trifluoride. The Celcon® is hydrolyzed before it is dried. The flake is dried by two fluid bed dryers. The Celcon® is then transferred to two parallel purge columns that deodorize the flake. The flake is then transferred to the natural finishing area where it is stabilized and extruded into pellet form for shipment.

Dioxolane Process

In the reactor column, formaldehyde and ethylene glycol combine to form dioxolane in the primary reaction. Some formaldehyde and ethylene glycol reacts to form trioxepane. A portion of the methanol fed to the column reacts with formaldehyde to form methylal. A small heavy ends residue stream is withdrawn to remove diethylene glycol. The overhead product from the reactor column feeds the stripper column where bulk water removal takes place. The dioxolane/water azeotrope is removed overhead along with light ends. The absorber column breaks the dioxolane/water azeotrope. Fresh ethylene glycol is fed to the top. Ethylene glycol, water, and some dioxolane exit the base. This stream is recycled to the reactor column. Dry dioxolane leaves the column as an overhead vapor. The finishing column removes light ends as an overhead liquid. Dioxolane product is removed as the finishing column residue stream and sent to the dioxolane rundown tanks.

FOPs at Site

The "application area" consists of the emission units and that portion of the site included in the application and this permit. Multiple FOPs may be issued to a site in accordance with 30 TAC § 122.201(e). When there is only one area for the site, then the application information and permit will include all units at the site. Additional FOPs that exist at the site, if any, are listed below.

Additional FOPs: O2005, O2007, O2013, O2015, O2016, O2413, O3269

Major Source Pollutants

The table below specifies the pollutants for which the site is a major source:

Major Pollutants	VOC, SO _x , NO _x , HAPs, CO
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Reading State of Texas' Federal Operating Permit

The Title V Federal Operating Permit (FOP) lists all state and federal air emission regulations and New Source Review (NSR) authorizations (collectively known as “applicable requirements”) that apply at a particular site or permit area (in the event a site has multiple FOPs). **The FOP does not authorize new emissions or new construction activities.** The FOP begins with an introductory page which is common to all Title V permits. This page gives the details of the company, states the authority of the issuing agency, requires the company to operate in accordance with this permit and 30 Texas Administrative Code (TAC) Chapter 122, requires adherence with NSR requirements of 30 TAC Chapter 116, and finally indicates the permit number and the issuance date.

This is followed by the table of contents, which is generally composed of the following elements. Not all permits will have all of the elements.

- General Terms and Conditions
- Special Terms and Conditions
 - Emissions Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting
 - Additional Monitoring Requirements
 - New Source Review Authorization Requirements
 - Compliance Requirements
 - Protection of Stratosphere Ozone
 - Permit Location
 - Permit Shield (30 TAC § 122.148)
- Attachments
 - Applicable Requirements Summary
 - Unit Summary
 - Applicable Requirements Summary
 - Additional Monitoring Requirements
 - Permit Shield
 - New Source Review Authorization References
 - Compliance Plan
 - Alternative Requirements
- Appendix A
 - Acronym list

General Terms and Conditions

The General Terms and Conditions are the same and appear in all permits. The first paragraph lists the specific citations for 30 TAC Chapter 122 requirements that apply to all Title V permit holders. The second paragraph describes the requirements for record retention. The third paragraph provides details for voiding the permit, if applicable. The fourth paragraph states that the permit holder shall comply with the requirements of 30 TAC Chapter 116 by obtaining a New Source Review authorization prior to new construction or modification of emission units located in the area covered by this permit. The fifth paragraph provides details on submission of reports required by the permit.

Special Terms and Conditions

Emissions Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting. The TCEQ has designated certain applicable requirements as site-wide requirements. A site-wide requirement is a requirement that applies uniformly to all the units or activities at the site. Units with only site-wide requirements are addressed on Form OP-REQ1 and are not required to be listed separately on a OP-UA Form or Form OP-SUM. Form OP-SUM must list all units addressed in the application and provide identifying information, applicable OP-UA Forms, and preconstruction authorizations. The various OP-UA Forms provide the characteristics of each unit from which applicable requirements are established. Some exceptions exist as a few units may have both site-wide requirements and unit specific requirements.

Other conditions. The other entries under special terms and conditions are in general terms referring to compliance with the more detailed data listed in the attachments.

Attachments

Applicable Requirements Summary. The first attachment, the Applicable Requirements Summary, has two tables, addressing unit specific requirements. The first table, the Unit Summary, includes a list of units with applicable requirements, the unit type, the applicable regulation, and the requirement driver. The intent of the requirement driver is to inform the reader that a given unit may have several different operating scenarios and the differences between those operating scenarios.

The applicable requirements summary table provides the detailed citations of the rules that apply to the various units. For each unit and operating scenario, there is an added modifier called the “index number,” detailed citations specifying monitoring and testing requirements, recordkeeping requirements, and reporting requirements. The data for this table are based on data supplied by the applicant on the OP-SUM and various OP-UA forms.

Additional Monitoring Requirement. The next attachment includes additional monitoring the applicant must perform to ensure compliance with the applicable standard. Compliance assurance monitoring (CAM) is often required to provide a reasonable assurance of compliance with applicable emission limitations/standards for large emission units that use control devices to achieve compliance with applicant requirements. When necessary, periodic monitoring (PM) requirements are specified for certain parameters (i.e. feed rates, flow rates, temperature, fuel type and consumption, etc.) to determine if a term and condition or emission unit is operating within specified limits to control emissions. These additional monitoring approaches may be required for two reasons. First, the applicable rules do not adequately specify monitoring requirements (exception- Maximum Achievable Control Technology Standards (MACTs) generally have sufficient monitoring), and second, monitoring may be required to fill gaps in the monitoring requirements of certain applicable requirements. In situations where the NSR permit is the applicable requirement requiring extra monitoring for a specific emission unit, the preferred solution is to have the monitoring requirements in the NSR permit updated so that all NSR requirements are consolidated in the NSR permit.

Permit Shield. A permit may or may not have a permit shield, depending on whether an applicant has applied for, and justified the granting of, a permit shield. A permit shield is a special condition included in the permit document stating that compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirement(s) or specified applicable state-only requirement(s).

New Source Review Authorization References. All activities which are related to emissions in the state of Texas must have a NSR authorization prior to beginning construction. This section lists all units in the permit and the NSR authorization that allowed the unit to be constructed or modified. Units that do not have unit specific applicable requirements other than the NSR authorization do not need to be listed in this attachment. While NSR permits are not physically a part of the Title V permit, they are legally incorporated into the Title V permit by reference. Those NSR permits whose emissions exceed certain PSD/NA thresholds must also undergo a Federal review of federally regulated pollutants in addition to review for state regulated pollutants.

Compliance Plan. A permit may have a compliance schedule attachment for listing corrective actions plans for any emission unit that is out of compliance with an applicable requirement.

Alternative Requirements. This attachment will list any alternative monitoring plans or alternative means of compliance for applicable requirements that have been approved by the EPA Administrator and/or the TCEQ Executive Director.

Appendix A

Acronym list. This attachment lists the common acronyms used when discussing the FOPs.

Stationary vents subject to 30 TAC Chapter 111, Subchapter A, § 111.111(a)(1)(B) addressed in the Special Terms and Conditions

The site contains stationary vents with a flowrate less than 100,000 actual cubic feet per minute (acfm) and constructed after January 31, 1972 which are limited, over a six-minute average, to 20% opacity as required by 30 TAC § 111.111(a)(1)(B). As a site may have a large number of stationary vents that fall into this category, they are not required to be listed individually in the permit's Applicable Requirement Summary. This is consistent with EPA's White Paper for Streamlined Development of Part 70 Permit Applications, July 10, 1995, that states that requirements that apply identically to emission units at a site can be treated on a generic basis such as source-wide opacity limits.

Periodic monitoring is specified in Special Term and Condition 3 for stationary vents subject to 30 TAC § 111.111(a)(1)(B) to verify compliance with the 20% opacity limit. These vents are not expected to produce visible emissions during normal operation. The TCEQ evaluated the probability of these sources violating the opacity standards and determined that there is a very low potential that an opacity standard would be exceeded. It was determined that continuous monitoring for these sources is not warranted as there would be very limited environmental benefit in continuously monitoring sources that have a low potential to produce visible emissions. Therefore, the TCEQ set the visible observation monitoring frequency for these sources to once per calendar quarter.

The TCEQ has exempted vents that are not capable of producing visible emissions from periodic monitoring requirements. These vents include sources of colorless VOCs, non-fuming liquids, and other materials that cannot produce emissions that obstruct the transmission of light. Passive ventilation vents, such as plumbing vents, are also included in this category. Since this category of vents are not capable of producing opacity due to the physical or chemical characteristics of the emission source, periodic monitoring is not required as it would not yield any additional data to assure compliance with the 20% opacity standard of 30 TAC § 111.111(a)(1)(B).

In the event that visible emissions are detected, either through the quarterly observation or other credible evidence, such as observations from company personnel, the permit holder shall either report a deviation or perform a Test Method 9 observation to determine the opacity consistent with the 6-minute averaging time specified in 30 TAC § 111.111(a)(1)(B). An additional provision is included to monitor combustion sources more frequently than quarterly if alternate fuels are burned for periods greater than 24 consecutive hours. This will address possible emissions that may arise when switching fuel types.

Federal Regulatory Applicability Determinations

The following chart summarizes the applicability of the principal air pollution regulatory programs to the permit area:

Regulatory Program	Applicability (Yes/No)
Prevention of Significant Deterioration (PSD)	No
Nonattainment New Source Review (NNSR)	No
Minor NSR	Yes
40 CFR Part 60 - New Source Performance Standards	Yes
40 CFR Part 61 - National Emission Standards for Hazardous Air Pollutants (NESHAPs)	Yes
40 CFR Part 63 - NESHAPs for Source Categories	Yes
Title IV (Acid Rain) of the Clean Air Act (CAA)	No
Title V (Federal Operating Permits) of the CAA	Yes
Title VI (Stratospheric Ozone Protection) of the CAA	Yes
CAIR (Clean Air Interstate Rule)	No

Basis for Applying Permit Shields

An operating permit applicant has the opportunity to specifically request a permit shield to document that specific applicable requirements do not apply to emission units in the permit. A permit shield is a special condition stating that compliance with the conditions of the permit shall be deemed compliance with the specified potentially applicable requirements or specified potentially applicable state-only requirements. A permit shield has been requested in the application for specific emission units. For the permit shield requests that have been approved, the basis of determination for regulations that the owner/operator need not comply with are located in the "Permit Shield" attachment of the permit.

Insignificant Activities

In general, units not meeting the criteria for inclusion on either Form OP-SUM or Form OP-REQ1 are not required to be addressed in the operating permit application. Examples of these types of units include, but are not limited to, the following:

1. Office activities such as photocopying, blueprint copying, and photographic processes.
2. Sanitary sewage collection and treatment facilities other than those used to incinerate wastewater treatment plant sludge. Stacks or vents for sanitary sewer plumbing traps are also included.
3. Food preparation facilities including, but not limited to, restaurants and cafeterias used for preparing food or beverages primarily for consumption on the premises.
4. Outdoor barbecue pits, campfires, and fireplaces.
5. Laundry dryers, extractors, and tumblers processing bedding, clothing, or other fabric items generated primarily at the premises. This does not include emissions from dry cleaning systems using perchloroethylene or petroleum solvents.
6. Facilities storing only dry, sweet natural gas, including natural gas pressure regulator vents.
7. Any air separation or other industrial gas production, storage, or packaging facility. Industrial gases, for purposes of this list, include only oxygen, nitrogen, helium, neon, argon, krypton, and xenon.
8. Storage and handling of sealed portable containers, cylinders, or sealed drums.
9. Vehicle exhaust from maintenance or repair shops.

10. Storage and use of non-VOC products or equipment for maintaining motor vehicles operated at the site (including but not limited to, antifreeze and fuel additives).
11. Air contaminant detectors and recorders, combustion controllers and shut-off devices, product analyzers, laboratory analyzers, continuous emissions monitors, other analyzers and monitors, and emissions associated with sampling activities. Exception to this category includes sampling activities that are deemed fugitive emissions and under a regulatory leak detection and repair program.
12. Bench scale laboratory equipment and laboratory equipment used exclusively for chemical and physical analysis, including but not limited to, assorted vacuum producing devices and laboratory fume hoods.
13. Steam vents, steam leaks, and steam safety relief valves, provided the steam (or boiler feedwater) has not contacted other materials or fluids containing regulated air pollutants other than boiler water treatment chemicals.
14. Storage of water that has not contacted other materials or fluids containing regulated air pollutants other than boiler water treatment chemicals.
15. Well cellars.
16. Fire or emergency response equipment and training, including but not limited to, use of fire control equipment including equipment testing and training, and open burning of materials or fuels associated with firefighting training.
17. Crucible or pot furnaces with a brim full capacity of less than 450 cubic inches of any molten metal.
18. Equipment used exclusively for the melting or application of wax.
19. All closed tumblers used for the cleaning or deburring of metal products without abrasive blasting, and all open tumblers with a batch capacity of 1,000 lbs. or less.
20. Shell core and shell mold manufacturing machines.
21. Sand or investment molds with a capacity of 100 lbs. or less used for the casting of metals;
22. Equipment used for inspection of metal products.
23. Equipment used exclusively for rolling, forging, pressing, drawing, spinning, or extruding either hot or cold metals by some mechanical means.
24. Instrument systems utilizing air, natural gas, nitrogen, oxygen, carbon dioxide, helium, neon, argon, krypton, and xenon.
25. Battery recharging areas.
26. Brazing, soldering, or welding equipment.

Determination of Applicable Requirements

The tables below include the applicability determinations for the emission units, the index number(s) where applicable, and all relevant unit attribute information used to form the basis of the applicability determination. The unit attribute information is a description of the physical properties of an emission unit which is used to determine the requirements to which the permit holder must comply. For more information about the descriptions of the unit attributes specific Unit Attribute Forms may be viewed at www.tceq.texas.gov/permitting/air/nav/air_all_ua_forms.html.

A list of unit attribute forms is included at the end of this document. Some examples of unit attributes include construction date; product stored in a tank; boiler fuel type; etc.. Generally, multiple attributes are needed to determine the requirements for a given emission unit and index number. The table below lists these attributes in the column entitled "Basis of Determination." Attributes that demonstrate that an applicable requirement applies will be the factual basis for the specific citations in an applicable requirement that apply to a unit for that index number. The TCEQ Air Permits Division has developed flowcharts for determining applicability of state and federal regulations based on the unit attribute information in a Decision Support System (DSS). These flowcharts can be accessed via the internet at www.tceq.texas.gov/permitting/air/nav/air_supportsys.html. The Air Permits Division staff may also be contacted for assistance at (512) 239-1250.

The attributes for each unit and corresponding index number provide the basis for determining the specific legal citations in an applicable requirement that apply, including emission limitations or standards, monitoring, recordkeeping, and reporting. The rules were found to apply or not apply by using the unit attributes as answers to decision questions found in the flowcharts of the DSS. Some additional attributes indicate which legal citations of a rule apply. The legal citations that apply to each emission unit may be found

in the Applicable Requirements Summary table of the draft permit. There may be some entries or rows of units and rules not found in the permit, or if the permit contains a permit shield, repeated in the permit shield area. These are sets of attributes that describe negative applicability, or; in other words, the reason why a potentially applicable requirement does not apply.

If applicability determinations have been made which differ from the available flowcharts, an explanation of the decisions involved in the applicability determination is specified in the column “Changes and Exceptions to RRT.” If there were no exceptions to the DSS, then this column has been removed.

The draft permit includes all emission limitations or standards, monitoring, recordkeeping and reporting required by each applicable requirement. If an applicable requirement does not require monitoring, recordkeeping, or reporting, the word “None” will appear in the Applicable Requirements Summary table. If additional periodic monitoring is required for an applicable requirement, it will be explained in detail in the portion of this document entitled “Rationale for Compliance Assurance Monitoring (CAM)/ Periodic Monitoring Methods Selected.”

When attributes demonstrate that a unit is not subject to an applicable requirement, the applicant may request a permit shield for those items. The portion of this document entitled “Basis for Applying Permit Shields” specifies which units, if any, have a permit shield.

Operational Flexibility

When an emission unit has multiple operating scenarios, it will have a different index number associated with each operating condition. This means that units are permitted to operate under multiple operating conditions. The applicable requirements for each operating condition are determined by a unique set of unit attributes. For example, a tank may store two different products at different points in time. The tank may, therefore, need to comply with two distinct sets of requirements, depending on the product that is stored. Both sets of requirements are included in the permit, so that the permit holder may store either product in the tank.

Determination of Applicable Requirements

Unit ID	Regulation	Index Number	Basis of Determination*
GRP-TANKS1	30 TAC Chapter 115, Storage of VOCs	115B-1	<p>Today's Date = Today's date is March 1, 2013 or later.</p> <p>Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria.</p> <p>Tank Description = Tank using a vapor recovery system (VRS)</p> <p>True Vapor Pressure = True vapor pressure is greater than or equal to 1.5 psia</p> <p>Product Stored = VOC other than crude oil or condensate</p> <p>Storage Capacity = Capacity is greater than 40,000 gallons</p> <p>Control Device Type = Other vapor recovery unit</p>
GRP-TANKS1	40 CFR Part 60, Subpart Kb	60Kb-1	<p>Product Stored = Volatile organic liquid</p> <p>Storage Capacity = Capacity is greater than or equal to 39,900 gallons (151,000 liters)</p> <p>Maximum True Vapor Pressure = True vapor pressure is greater than or equal to 0.75 psia but less than 11.1 psia</p> <p>Storage Vessel Description = CVS and control device other than a flare (fixed roof)</p>
GRP-TANKS2	30 TAC Chapter 115, Storage of VOCs	115B-1	<p>Today's Date = Today's date is March 1, 2013 or later.</p> <p>Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria.</p> <p>Tank Description = Tank using a vapor recovery system (VRS)</p> <p>True Vapor Pressure = True vapor pressure is greater than or equal to 1.5 psia</p> <p>Product Stored = VOC other than crude oil or condensate</p> <p>Storage Capacity = Capacity is greater than 1,000 gallons but less than or equal to 25,000 gallons</p> <p>Control Device Type = Other vapor recovery unit</p>
GRP-TANKS2	40 CFR Part 60, Subpart Kb	60Kb-1	<p>Product Stored = Volatile organic liquid</p> <p>Storage Capacity = Capacity is greater than or equal to 10,600 gallons (40,000 liters) but less than 19,800 gallons (75,000 liters)</p>
GRP-TANKS3	30 TAC Chapter 115, Storage of VOCs	115B-1	<p>Today's Date = Today's date is March 1, 2013 or later.</p> <p>Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria.</p> <p>Tank Description = Tank using a vapor recovery system (VRS)</p> <p>True Vapor Pressure = True vapor pressure is greater than or equal to 1.5 psia</p> <p>Product Stored = VOC other than crude oil or condensate</p> <p>Storage Capacity = Capacity is greater than 25,000 gallons but less than or equal to 40,000 gallons</p> <p>Control Device Type = Other vapor recovery unit</p>
GRP-TANKS4	30 TAC Chapter 115, Storage of VOCs	115B-1	<p>Today's Date = Today's date is March 1, 2013 or later.</p> <p>Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria.</p> <p>Tank Description = Tank using a submerged fill pipe</p>

Unit ID	Regulation	Index Number	Basis of Determination*
			<p>True Vapor Pressure = True vapor pressure is greater than or equal to 1.5 psia</p> <p>Product Stored = VOC other than crude oil or condensate</p> <p>Storage Capacity = Capacity is greater than 40,000 gallons</p>
GRP-TANKS5	30 TAC Chapter 115, Storage of VOCs	115B-1	<p>Today's Date = Today's date is March 1, 2013 or later.</p> <p>Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria.</p> <p>Tank Description = Tank using a vapor recovery system (VRS)</p> <p>True Vapor Pressure = True vapor pressure is greater than or equal to 1.5 psia</p> <p>Product Stored = VOC other than crude oil or condensate</p> <p>Storage Capacity = Capacity is greater than 1,000 gallons but less than or equal to 25,000 gallons</p> <p>Control Device Type = Other vapor recovery unit</p>
GRP-TANKS6	30 TAC Chapter 115, Storage of VOCs	115B-1	<p>Today's Date = Today's date is March 1, 2013 or later.</p> <p>Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria.</p> <p>Tank Description = Tank using a vapor recovery system (VRS)</p> <p>True Vapor Pressure = True vapor pressure is greater than or equal to 1.5 psia</p> <p>Product Stored = VOC other than crude oil or condensate</p> <p>Storage Capacity = Capacity is greater than 25,000 gallons but less than or equal to 40,000 gallons</p> <p>Control Device Type = Other vapor recovery unit</p>
GRP-TANKS6	40 CFR Part 63, Subpart G	63G-1	<p>MACT Subpart F/G Applicability = The unit is a Group 2 vessel.</p> <p>NESHAP Subpart Y Applicability = The unit is not subject to 40 CFR Part 61, Subpart Y.</p> <p>NSPS Subpart Kb Applicability = The unit is not subject to 40 CFR Part 60, Subpart Kb.</p>
GRP-TANKS7	30 TAC Chapter 115, Storage of VOCs	115B-1	<p>Today's Date = Today's date is March 1, 2013 or later.</p> <p>Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria.</p> <p>Tank Description = Tank using a vapor recovery system (VRS)</p> <p>True Vapor Pressure = True vapor pressure is less than 1.0 psia</p> <p>Product Stored = VOC other than crude oil or condensate</p> <p>Storage Capacity = Capacity is greater than 40,000 gallons</p>
GRP-TANKS8	30 TAC Chapter 115, Storage of VOCs	115B-1	<p>Today's Date = Today's date is March 1, 2013 or later.</p> <p>Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria.</p> <p>Product Stored = Other than crude oil, condensate, or VOC</p>
GRP-TANKS8	40 CFR Part 60, Subpart Kb	60Kb-1	<p>Product Stored = Stored product other than volatile organic liquid or petroleum liquid</p>

Unit ID	Regulation	Index Number	Basis of Determination*
GRP-TANKS9	30 TAC Chapter 115, Storage of VOCs	115B-1	<p>Today's Date = Today's date is March 1, 2013 or later.</p> <p>Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria.</p> <p>Product Stored = VOC other than crude oil or condensate</p> <p>Storage Capacity = Capacity is less than or equal to 1,000 gallons</p>
GRP-TANKS9	40 CFR Part 60, Subpart Kb	60Kb-1	<p>Product Stored = Volatile organic liquid</p> <p>Storage Capacity = Capacity is greater than or equal to 10,600 gallons (40,000 liters) but less than 19,800 gallons (75,000 liters)</p>
V-1688	30 TAC Chapter 115, Storage of VOCs	115B-1	<p>Today's Date = Today's date is March 1, 2013 or later.</p> <p>Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria.</p> <p>Tank Description = Tank using an internal floating roof (IFR)</p> <p>True Vapor Pressure = True vapor pressure is greater than or equal to 1.5 psia</p> <p>Product Stored = VOC other than crude oil or condensate</p> <p>Storage Capacity = Capacity is greater than 40,000 gallons</p>
V-30403	30 TAC Chapter 115, Storage of VOCs	115B-1	<p>Today's Date = Today's date is March 1, 2013 or later.</p> <p>Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria.</p> <p>Tank Description = Tank using a submerged fill pipe</p> <p>True Vapor Pressure = True vapor pressure is less than 1.0 psia</p> <p>Product Stored = VOC other than crude oil or condensate</p> <p>Storage Capacity = Capacity is greater than 25,000 gallons but less than or equal to 40,000 gallons</p>
V-30403	40 CFR Part 60, Subpart Kb	60Kb-1	<p>Product Stored = Volatile organic liquid</p> <p>Storage Capacity = Capacity is greater than or equal to 19,800 gallons (75,000 liters) but less than 39,900 gallons (151,000 liters)</p> <p>Maximum True Vapor Pressure = True vapor pressure is less than 2.2 psia</p>
V-30403	40 CFR Part 63, Subpart G	63G-1	<p>MACT Subpart F/G Applicability = The unit is a Group 2 vessel.</p> <p>NESHAP Subpart Y Applicability = The unit is not subject to 40 CFR Part 61, Subpart Y.</p> <p>NSPS Subpart Kb Applicability = The unit is not subject to 40 CFR Part 60, Subpart Kb.</p>
V-30734	30 TAC Chapter 115, Storage of VOCs	115B-1	<p>Today's Date = Today's date is March 1, 2013 or later.</p> <p>Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria.</p> <p>Product Stored = VOC other than crude oil or condensate</p> <p>Storage Capacity = Capacity is less than or equal to 1,000 gallons</p>
V-30734	40 CFR Part 60, Subpart Kb	60Kb-1	<p>Product Stored = Volatile organic liquid</p> <p>Storage Capacity = Capacity is less than 10,600 gallons (40,000 liters)</p>

Unit ID	Regulation	Index Number	Basis of Determination*
V-30735	30 TAC Chapter 115, Storage of VOCs	115B-1	<p>Today's Date = Today's date is March 1, 2013 or later.</p> <p>Alternate Control Requirement = Not using an alternate method for demonstrating and documenting continuous compliance with applicable control requirements or exemption criteria.</p> <p>Product Stored = VOC other than crude oil or condensate</p> <p>Storage Capacity = Capacity is less than or equal to 1,000 gallons</p>
V-30735	40 CFR Part 60, Subpart Kb	60Kb-1	<p>Product Stored = Volatile organic liquid</p> <p>Storage Capacity = Capacity is less than 10,600 gallons (40,000 liters)</p>
SLOPLD	30 TAC Chapter 115, Loading and Unloading of VOC	115C-1	<p>Chapter 115 Control Device Type = Control device other than a flare, vapor combustor, catalytic incinerator, direct flame incinerator, chiller, or carbon adsorption system.</p> <p>Chapter 115 Facility Type = Facility type other than a gasoline terminal, gasoline bulk plant, motor vehicle fuel dispensing facility or marine terminal.</p> <p>Alternate Control Requirement (ACR) = No alternate control requirements are being utilized.</p> <p>Vapor Tight = Not all liquid and vapor lines are equipped with fittings which make vapor-tight connections that close automatically when disconnected.</p> <p>Product Transferred = Volatile organic compounds other than liquefied petroleum gas, crude oil, condensate and gasoline.</p> <p>Transfer Type = Loading and unloading.</p> <p>True Vapor Pressure = True vapor pressure is greater than or equal to 1.5 psia.</p> <p>Daily Throughput = Daily throughput not determined since 30 TAC § 115.217(a)(2)(A) or 30 TAC § 115.217(b)(3)(A) exemption is not utilized.</p> <p>Control Options = Vapor control system that maintains a control efficiency of at least 90%.</p>
V-30403UNL	30 TAC Chapter 115, Loading and Unloading of VOC	115C-1	<p>Chapter 115 Facility Type = Facility type other than a gasoline terminal, gasoline bulk plant, motor vehicle fuel dispensing facility or marine terminal.</p> <p>Alternate Control Requirement (ACR) = No alternate control requirements are being utilized.</p> <p>Product Transferred = Volatile organic compounds other than liquefied petroleum gas, crude oil, condensate and gasoline.</p> <p>Transfer Type = Only unloading.</p> <p>True Vapor Pressure = True vapor pressure is less than 1.5 psia.</p>
V-30403UNL	40 CFR Part 63, Subpart G	63G-1	<p>Transfer Rack Type = Group 2 transfer rack (as defined in 40 CFR § 63.111).</p> <p>Subject to Subpart BB = The transfer rack is not subject to 40 CFR Part 61, Subpart BB.</p>
FU-DIOX	40 CFR Part 60, Subpart VV	60VV-1	<p>Closed Vent (or Vapor Collection) Systems = The fugitive unit does not contain closed vent or vapor collection systems.</p> <p>Compressors = The fugitive unit does not contain compressors.</p> <p>Enclosed Combustion Device = The fugitive unit does not contain enclosed combustion devices.</p> <p>Equipment in VOC Service = The fugitive unit contains equipment designed to operate in VOC service.</p> <p>Flare = The fugitive unit does not contain flares.</p> <p>Produces Chemicals = The fugitive unit is part of a facility that produces as an intermediate or final product one or more of the chemicals listed in 40 CFR § 60.489.</p> <p>Pumps in Heavy Liquid Service = The fugitive unit does not contain pumps in heavy liquid service.</p>

Unit ID	Regulation	Index Number	Basis of Determination*
			<p>Sampling Connection Systems = The fugitive unit does not contain sampling connection systems.</p> <p>Valves in Gas/Vapor or Light Liquid Service = The fugitive unit contains valves in gas/vapor or light liquid service.</p> <p>Vapor Recovery System = The fugitive unit contains vapor recovery systems.</p> <p>2.0% = The fugitive unit is not complying with an allowable percentage of valves leaking equal to or less than 2.0%.</p> <p>Affected Facility = The fugitive unit is part of a facility that is an affected facility as defined in 40 CFR § 60.480(a)(2).</p> <p>Equivalent Emission Limitation = No equivalent emission limitation is used for vapor recovery systems.</p> <p>Vacuum Service = The fugitive unit does not contain equipment in vacuum service.</p> <p>Construction/Modification Date = After January 5, 1981 and on or before November 7, 2006.</p> <p>Equivalent Emission Limitation = No equivalent emission limitation is used for valves in gas/vapor or light liquid service.</p> <p>Compliance Option = Choosing to comply with the provisions of 40 CFR Part 60, Subpart VV.</p> <p>Complying with 40 CFR § 60.482-10 = Vapor recovery systems are complying with § 60.482-10.</p> <p>Pumps in Light Liquid Service = The fugitive unit contains pumps in light liquid service.</p> <p>Complying with 40 CFR § 60.482-7 = Valves in gas/vapor or light liquid service are complying with § 60.482-7.</p> <p>Design Capacity = Site with a design capacity is greater than or equal to 1,000 Mg/yr.</p> <p>Equivalent Emission Limitation = No equivalent emission limitation is used for pumps in light liquid service.</p> <p>Flanges and Other Connectors = The fugitive unit contains flanges and other connectors.</p> <p>Open-ended Valves or Lines = The fugitive unit does not contain open-ended valves or lines.</p> <p>Pressure Relief Devices in Gas/Vapor Service = The fugitive unit contains pressure relief devices in gas/vapor service.</p> <p>Valves in Heavy Liquid Service = The fugitive unit does not contain valves in heavy liquid service.</p> <p>Equivalent Emission Limitation = No equivalent emission limitation is used for flanges and other connectors.</p> <p>Produces Heavy Liquid Chemicals = The facility produces chemicals other than or in addition to heavy liquid chemicals only from heavy liquid feed or raw materials.</p> <p>Beverage Alcohol Production = The facility does not produce only beverage alcohol.</p> <p>Complying with 40 CFR § 60.482-2 = Pumps in light liquid service are complying with § 60.482-2.</p> <p>Complying with 40 CFR § 60.482-8 = Flanges and other connectors are complying with § 60.482-8.</p>
FU-DIOX	40 CFR Part 63, Subpart H	63H-1	<p>ANY (CLOSED VENT SYSTEMS) = COMPONENT PRESENT</p> <p>ANY (OPEN-ENDED VALVES OR LINES) = COMPONENT NOT PRESENT</p> <p>BYPASS LINES = FUGITIVE UNIT WITH A CLOSED-VENT SYSTEM DOES NOT CONTAIN A BY-PASS LINE THAT COULD DIVERT A VENT STREAM AWAY FROM THE CONTROL DEVICE AND TO THE ATMOSPHERE</p> <p>ENCLOSED-VENTED PROCESS UNIT AMEL = UNIT DOES NOT CONTAIN A TOTALLY ENCLOSED VENTED PROCESS UNIT COMPLYING WITH AN ALTERNATE MEANS OF EMISSION LIMITATION IN § 63.179</p> <p>EQUIPMENT TYPE = FUGITIVE UNIT CONTAINS EQUIPMENT LISTED IN 40 CFR § 63.160(A) WHICH IS OPERATED IN ORGANIC HAZARDOUS AIR POLLUTANT SERVICE</p> <p>GAS/VAPOR OR LIGHT LIQUID SERVICE (AGITATORS) = COMPONENT NOT PRESENT</p> <p>LIGHT LIQUID SERVICE (PUMPS) = COMPONENT PRESENT</p> <p>HEAVY LIQUID SERVICE = ENCLOSED VENTED PROCESS UNIT DOES NOT CONTAIN EQUIPEMENT IN HEAVY LIQUID SERVICE</p> <p>HEAVY LIQUID SERVICE (AGITATORS) = COMPONENT NOT PRESENT</p>

Unit ID	Regulation	Index Number	Basis of Determination*
			<p>HEAVY LIQUID SERVICE (OPEN-ENDED VALVES OR LINES) = COMPONENT NOT PRESENT</p> <p>HEAVY LIQUID SERVICE (PUMPS) = COMPONENT NOT PRESENT</p> <p>NON RESEARCH AND DEVELOPMENT/BATCH PROCESSES = FUGITIVE UNIT CONTAINS PROCESSES OTHER THAN RESEARCH AND DEVELOPMENT FACILITIES AND BENCH-SCALE BATCH PROCESSES</p> <p>RECOVERY OR RECAPTURE DEVICES (CLOSED VENT SYSTEMS) = COMPONENT PRESENT</p> <p>UNSAFE TO INSPECT = FUGITIVE UNIT CONTAINS ANY CLOSED-VENT SYSTEM WITH PARTS DESIGNATED AS UNSAFE TO INSPECT</p> <p>ANY (INSTRUMENTATION SYSTEMS) = COMPONENT NOT PRESENT</p> <p>BATCH PROCESS AMEL = UNIT DOES NOT CONTAIN A BATCH PROCESS UNIT COMPLYING WITH AN ALTERNATE MEANS OF EMISSION LIMITATION IN § 63.178</p> <p>DIFFICULT TO INSPECT = FUGITIVE UNIT CONTAINS ANY CLOSED-VENT SYSTEM WITH PARTS DESIGNATED AS DIFFICULT TO INSPECT</p> <p>GAS/VAPOR OR LIGHT LIQUID SERVICE (VALVES) = COMPONENT PRESENT</p> <p>QIP = UNIT DOES NOT OPT TO COMPLY WITH A QUALITY IMPROVEMENT PROGRAM FOR PUMPS</p> <p>VACUUM SERVICE = NOT ALL OF THE EQUIPMENT IN THE FUGITIVE UNIT IS IN VACUUM SERVICE</p> <p>ANY (COMPRESSORS) = COMPONENT NOT PRESENT</p> <p>EMPLOYEE NUMBER = THE CORPORATION EMPLOYS 100 OR MORE PERSONS</p> <p>ENCLOSED COMBUSTION DEVICES (CLOSED VENT SYSTEMS) = COMPONENT NOT PRESENT</p> <p>HEAVY LIQUID SERVICE (INSTRUMENTATION SYSTEMS) = COMPONENT NOT PRESENT</p> <p>HEAVY LIQUID SERVICE (VALVES) = COMPONENT NOT PRESENT</p> <p>LESS THAN 300 OPERATING HOURS = THE FUGITIVE UNIT DOES NOT CONTAIN ANY EQUIPMENT IN ORGANIC HAZARDOUS AIR POLLUTANT (HAP) SERVICE THAT IS INTENDED TO OPERATE LESS THAN 300 HOURS PER CALENDAR YEAR</p> <p>PRESSURE TEST = BATCH PROCESS EQUIPMENT TRAIN IS NOT PRESSURE TESTED TO DEMONSTRATE COMPLIANCE WITH SUBPART H</p> <p>ANY (SURGE CONTROL VESSELS OR BOTTOMS RECEIVERS) = COMPONENT NOT PRESENT</p> <p>GAS VAPOR SERVICE (PRESSURE RELIEF DEVICES) = COMPONENT PRESENT</p> <p>HEAVY LIQUID SERVICE = BATCH PROCESS UNIT DOES NOT CONTAIN EQUIPEMENT IN HEAVY LIQUID SERVICE</p> <p>QIP = UNIT DOES NOT OPT TO COMPLY WITH A QUALITY IMPROVEMENT PROGRAM FOR VALVES</p> <p>AMEL = FUGITIVE UNIT SOURCE OWNER/OPERATOR IS NOT ELECTING TO COMPLY WITH AN ALTERNATIVE MEANS OF EMISSION LIMITATION (AMEL)</p> <p>FLARES (CLOSED VENT SYSTEMS) = COMPONENT NOT PRESENT</p> <p>GAS/VAPOR OR LIGHT LIQUID SERVICE (CONNECTORS) = COMPONENT PRESENT</p> <p>GENERAL AMEL = UNIT IS NOT COMPLYING WITH AN ALTERNATE MEANS OF EMISSION LIMITATION UNDER § 63.177</p> <p>HEAVY LIQUID SERVICE (SURGE CONTROL VESSELS OR BOTTOMS RECEIVERS) = COMPONENT NOT PRESENT</p> <p>LIQUID SERVICE (PRESSURE RELIEF DEVICES) = COMPONENT PRESENT</p> <p>HEAVY LIQUID SERVICE (CONNECTORS) = COMPONENT NOT PRESENT</p> <p>HEAVY LIQUID SERVICE (PRESSURE RELIEF DEVICES) = COMPONENT NOT PRESENT</p> <p>ANY (SAMPLING CONNECTION SYSTEMS) = COMPONENT NOT PRESENT</p> <p>HEAVY LIQUID SERVICE = EQUIPMENT OPERATED UNDER GENERAL AMEL (§ 63.177) IS NOT IN HEAVY LIQUID SERVICE</p> <p>HEAVY LIQUID SERVICE (SAMPLING CONNECTION SYSTEMS) = COMPONENT NOT PRESENT</p>

Unit ID	Regulation	Index Number	Basis of Determination*
GRP-FUGITIVES	40 CFR Part 61, Subpart V	61V-1	<p>Compressors = The fugitive unit does not contain compressors in VHAP service.</p> <p>Enclosed Combustion Device = The fugitive unit does not contain enclosed combustion devices in VHAP service.</p> <p>Flare = The fugitive unit does not contain flares.</p> <p>Pressure Relief Devices in Gas/Vapor Service = The fugitive unit contains pressure relief devices in gas/vapor VHAP service.</p> <p>Product Accumulator Vessels = The fugitive unit does not contain product accumulator vessels.</p> <p>Sampling Connection Systems = The fugitive unit does not contain sampling connection systems in VHAP service.</p> <p>Valves = The fugitive unit contains valves in VHAP service.</p> <p>Vapor Recovery System = The fugitive unit contains vapor recovery systems in VHAP service.</p> <p>Complying with 40 CFR § 61.242-4 = Pressure relief devices in gas/vapor service are complying with § 61.242-4.</p> <p>Complying with 40 CFR § 61.242-7 = Valves are complying with § 61.242-7.</p> <p>Complying with 40 CFR § 61.242-11(b) = No vapor recovery systems are complying with § 61.242-11(b).</p> <p>Flanges and Other Connectors = The fugitive unit contains flanges and other connectors in VHAP service.</p> <p>Open-ended Valves or Lines = The fugitive unit does not contain open-ended valves or lines in VHAP service.</p> <p>Pressure Relief Devices in Liquid Service = The fugitive unit contains pressure relief devices in liquid VHAP service.</p> <p>Complying with 40 CFR § 61.242-8 = Pressure relief devices in liquid service are complying with § 61.242-8.</p>
GRP-TOWERS	40 CFR Part 63, Subpart Q	63Q-1	Used Compounds Containing Chromium on or After September 8, 1994 = The industrial process cooling tower has not used compounds containing chromium on or after September 8, 1994.
SHCOOLTWR	40 CFR Part 63, Subpart Q	63Q-1	Used Compounds Containing Chromium on or After September 8, 1994 = The industrial process cooling tower has not used compounds containing chromium on or after September 8, 1994.
GRP-VENTS1	30 TAC Chapter 115, Vent Gas Controls	115B-1	<p>Chapter 115 Division = The vent stream does not originate from a source for which another Division in 30 TAC Chapter 115 establishes a control requirement, emission specification, or exemption for that source.</p> <p>Combustion Exhaust = The vent stream is not from a combustion unit exhaust or the combustion unit is used as a control device for a vent stream originating from a noncombustion source subject to 30 TAC Chapter 115, Subchapter B, Division 2.</p> <p>Vent Type = Vent gas stream emissions of the specified classes of VOCs including aldehydes, alcohols, aromatics, ethers, olefins, peroxides, amines, acids, esters, ketones, sulfides, and branched chain hydrocarbons (C8 and above).</p> <p>Combined 24-Hour VOC Weight = Combined VOC weight is less than or equal to 100 pounds (45.4 kg).</p>
GRP-VENTS2	30 TAC Chapter 115, Vent Gas Controls	115B-1	<p>Chapter 115 Division = The vent stream does not originate from a source for which another Division in 30 TAC Chapter 115 establishes a control requirement, emission specification, or exemption for that source.</p> <p>Combustion Exhaust = The vent stream is not from a combustion unit exhaust or the combustion unit is used as a control device for a vent stream originating from a noncombustion source subject to 30 TAC Chapter 115, Subchapter B, Division 2.</p> <p>Vent Type = Vent gas stream emissions of the specified classes of VOCs including aldehydes, alcohols, aromatics, ethers, olefins, peroxides, amines, acids, esters, ketones, sulfides, and branched chain hydrocarbons (C8 and above).</p> <p>Combined 24-Hour VOC Weight = Combined VOC weight is greater than 100 pounds (45.4 kg).</p> <p>VOC Concentration = VOC concentration is less than 30,000 ppmv.</p>
GRP-VENTS3	30 TAC Chapter 115, Vent Gas Controls	115B-1	<p>Chapter 115 Division = The vent stream does not originate from a source for which another Division in 30 TAC Chapter 115 establishes a control requirement, emission specification, or exemption for that source.</p> <p>Combustion Exhaust = The vent stream is not from a combustion unit exhaust or the combustion unit is used as a control device for a</p>

Unit ID	Regulation	Index Number	Basis of Determination*
			<p>vent stream originating from a noncombustion source subject to 30 TAC Chapter 115, Subchapter B, Division 2.</p> <p>Vent Type = Vent gas stream emissions of the specified classes of VOCs including aldehydes, alcohols, aromatics, ethers, olefins, peroxides, amines, acids, esters, ketones, sulfides, and branched chain hydrocarbons (C8 and above).</p> <p>Combined 24-Hour VOC Weight = Combined VOC weight is less than or equal to 100 pounds (45.4 kg).</p>
GRP-VENTS3	40 CFR Part 63, Subpart G	63G-1	<p>Overlap = Title 40 CFR Part 63, Subpart G only</p> <p>Group 1 = The process vent is a Group 2 process vent.</p> <p>HAP Concentration = HAP concentration is not needed to determine applicability.</p> <p>By-pass Lines = The vent system does not contain by-pass lines that can divert the vent stream from the control device.</p> <p>Flow Indicator = By-pass line valve is secured with a car-seal or lock-and-key type configuration.</p> <p>MACT TRE Index Value = TRE index value is greater than 4.0 as calculated using the procedures of 40 CFR § 63.115(d).</p>
GRP-VENTS4	30 TAC Chapter 115, Vent Gas Controls	115B-1	<p>Alternate Control Requirement = Alternate control is not used.</p> <p>Chapter 115 Division = The vent stream does not originate from a source for which another Division in 30 TAC Chapter 115 establishes a control requirement, emission specification, or exemption for that source.</p> <p>Combustion Exhaust = The vent stream is not from a combustion unit exhaust or the combustion unit is used as a control device for a vent stream originating from a noncombustion source subject to 30 TAC Chapter 115, Subchapter B, Division 2.</p> <p>Control Device Type = Vapor recovery system, as defined in 30 TAC § 115.10, other than an afterburner, blast furnace combustion device, boiler, catalytic or direct flame incinerator, carbon adsorption system, chiller, flare or vapor combustor.</p> <p>Vent Type = Vent gas stream emissions of the specified classes of VOCs including aldehydes, alcohols, aromatics, ethers, olefins, peroxides, amines, acids, esters, ketones, sulfides, and branched chain hydrocarbons (C8 and above).</p> <p>Combined 24-Hour VOC Weight = Combined VOC weight is less than or equal to 100 pounds (45.4 kg).</p> <p>VOC Concentration = VOC concentration is less than 30,000 ppmv.</p> <p>VOC Concentration/Emission Rate @ Max Operating Conditions = Either the VOC concentration or emission rate is greater than the applicable exemption limit at maximum actual operating conditions or the alternate recordkeeping requirements of 30 TAC § 115.126(4) are not being selected.</p>
TF TOLOAD	30 TAC Chapter 115, Vent Gas Controls	115B-1	<p>Chapter 115 Division = The vent stream does not originate from a source for which another Division in 30 TAC Chapter 115 establishes a control requirement, emission specification, or exemption for that source.</p> <p>Combustion Exhaust = The vent stream is not from a combustion unit exhaust or the combustion unit is used as a control device for a vent stream originating from a noncombustion source subject to 30 TAC Chapter 115, Subchapter B, Division 2.</p> <p>Vent Type = Vent gas stream emissions of the specified classes of VOCs including aldehydes, alcohols, aromatics, ethers, olefins, peroxides, amines, acids, esters, ketones, sulfides, and branched chain hydrocarbons (C8 and above).</p> <p>Combined 24-Hour VOC Weight = Combined VOC weight is less than or equal to 100 pounds (45.4 kg).</p>
GRP-DISTILL	40 CFR Part 60, Subpart NNN	60NNN-1	<p>Subpart NNN Chemicals = The distillation unit produces any chemical listed in 40 CFR § 60.667 as a product, co-product, by-product, or intermediate.</p> <p>Construction/Modification Date = After December 30, 1983.</p> <p>Vent Type = Two or more distillation units discharging vent stream into a common vapor recovery system.</p> <p>Distillation Unit Type = Does not qualify for any exemption under § 60.660(c)(1)-(3).</p> <p>Total Design Capacity = Less than 1 gigagram per year.</p>

Unit ID	Regulation	Index Number	Basis of Determination*
T-286	40 CFR Part 60, Subpart NNN	60NNN-1	<p>Subpart NNN Chemicals = The distillation unit produces any chemical listed in 40 CFR § 60.667 as a product, co-product, by-product, or intermediate.</p> <p>Total Resource Effectiveness = TRE index value greater than 8.0 not from a halogenated vent stream.</p> <p>Construction/Modification Date = After December 30, 1983.</p> <p>Vent Type = Two or more distillation units discharging vent stream into a common vapor recovery system.</p> <p>Distillation Unit Type = Does not qualify for any exemption under § 60.660(c)(1)-(3).</p> <p>Total Design Capacity = 1 gigagram per year or greater.</p> <p>Vent Stream Flow Rate = Flow rate greater than or equal to 0.008 scm/min.</p>
GRP-REACTORS	40 CFR Part 60, Subpart III	60III-1	<p>Construction/Modification Date = After October 21, 1983.</p> <p>Affected Facility = Facility is not subject to 40 CFR Part 60, Subpart III.</p>
GRP-REACTORS	40 CFR Part 60, Subpart RRR	60RRR-1	Chemicals Listed in 40 CFR § 60.707 = The affected facility is not part of a process unit that produces chemicals listed in 40 CFR § 60.707 as a product, co-product, by product, or intermediate.
GRP-CONDENSORS	40 CFR Part 63, Subpart F	63F-1	<p>Applicable Chemicals = The chemical manufacturing process unit manufactures, as a primary product, one or more of the chemicals listed in 40 CFR § 63.100(b)(1)(i) or 40 CFR § 63.100(b)(1)(ii).</p> <p>Table 2 HAP = The chemical manufacturing process unit uses as a reactant or manufactures, as a product or co-product, one or more of the organic hazardous air pollutants in Table 2.</p> <p>Alternate Means of Emission Limitation = No alternative means of emission limitation has been approved by the EPA Administrator to achieve a reduction in organic HAP emission or no alternate has been requested.</p> <p>Heat Exchange System = A heat exchange system is utilized.</p> <p>Cooling Water Pressure = The heat exchange system is operated with the minimum pressure on the cooling water side at least 35 kilopascals greater than the maximum pressure on the process side.</p>
HE-30154	40 CFR Part 63, Subpart F	63F-1	<p>Applicable Chemicals = The chemical manufacturing process unit manufactures, as a primary product, one or more of the chemicals listed in 40 CFR § 63.100(b)(1)(i) or 40 CFR § 63.100(b)(1)(ii).</p> <p>Intervening Cooling Fluid = There is no intervening cooling fluid containing less than 5 percent by weight of total HAPs listed in Table 4 of 40 CFR Part 63, Subpart F, between the process and cooling water.</p> <p>Table 2 HAP = The chemical manufacturing process unit uses as a reactant or manufactures, as a product or co-product, one or more of the organic hazardous air pollutants in Table 2.</p> <p>Table 4 HAP Content = The recirculating heat exchange system is used exclusively to cool process fluids that contain less than 5 percent by weight of total HAPs listed in Table 4 of title 40 CFR Part 63, Subpart F.</p> <p>Alternate Means of Emission Limitation = No alternative means of emission limitation has been approved by the EPA Administrator to achieve a reduction in organic HAP emission or no alternate has been requested.</p> <p>Heat Exchange System = A heat exchange system is utilized.</p> <p>Cooling Water Monitored = The cooling water is being monitored for the presence of one or more HAPs or other representative substances whose presence in cooling water indicates a leak.</p> <p>Cooling Water Pressure = The heat exchange system is not operated with the minimum pressure on the cooling water side at least 35 kilopascals greater than the maximum pressure on the process side.</p>
HE-30155	40 CFR Part 63, Subpart F	63F-1	<p>Applicable Chemicals = The chemical manufacturing process unit manufactures, as a primary product, one or more of the chemicals listed in 40 CFR § 63.100(b)(1)(i) or 40 CFR § 63.100(b)(1)(ii).</p> <p>Intervening Cooling Fluid = There is no intervening cooling fluid containing less than 5 percent by weight of total HAPs listed in Table 4</p>

Unit ID	Regulation	Index Number	Basis of Determination*
			<p>of 40 CFR Part 63, Subpart F, between the process and cooling water.</p> <p>Table 2 HAP = The chemical manufacturing process unit uses as a reactant or manufactures, as a product or co-product, one or more of the organic hazardous air pollutants in Table 2.</p> <p>Table 4 HAP Content = The recirculating heat exchange system is used exclusively to cool process fluids that contain less than 5 percent by weight of total HAPs listed in Table 4 of title 40 CFR Part 63, Subpart F.</p> <p>Alternate Means of Emission Limitation = No alternative means of emission limitation has been approved by the EPA Administrator to achieve a reduction in organic HAP emission or no alternate has been requested.</p> <p>Heat Exchange System = A heat exchange system is utilized.</p> <p>Cooling Water Monitored = The cooling water is being monitored for the presence of one or more HAPs or other representative substances whose presence in cooling water indicates a leak.</p> <p>Cooling Water Pressure = The heat exchange system is not operated with the minimum pressure on the cooling water side at least 35 kilopascals greater than the maximum pressure on the process side.</p>
HE-30170	40 CFR Part 63, Subpart F	63F-1	<p>Applicable Chemicals = The chemical manufacturing process unit manufactures, as a primary product, one or more of the chemicals listed in 40 CFR § 63.100(b)(1)(i) or 40 CFR § 63.100(b)(1)(ii).</p> <p>Intervening Cooling Fluid = There is no intervening cooling fluid containing less than 5 percent by weight of total HAPs listed in Table 4 of 40 CFR Part 63, Subpart F, between the process and cooling water.</p> <p>Table 2 HAP = The chemical manufacturing process unit uses as a reactant or manufactures, as a product or co-product, one or more of the organic hazardous air pollutants in Table 2.</p> <p>Table 4 HAP Content = The recirculating heat exchange system is used exclusively to cool process fluids that contain less than 5 percent by weight of total HAPs listed in Table 4 of title 40 CFR Part 63, Subpart F.</p> <p>Alternate Means of Emission Limitation = No alternative means of emission limitation has been approved by the EPA Administrator to achieve a reduction in organic HAP emission or no alternate has been requested.</p> <p>Heat Exchange System = A heat exchange system is utilized.</p> <p>Cooling Water Monitored = The cooling water is being monitored for the presence of one or more HAPs or other representative substances whose presence in cooling water indicates a leak.</p> <p>Cooling Water Pressure = The heat exchange system is operated with the minimum pressure on the cooling water side at least 35 kilopascals greater than the maximum pressure on the process side.</p>

* - The "unit attributes" or operating conditions that determine what requirements apply.

NSR vs. Title V FOP

The state of Texas has two Air permitting programs, New Source Review (NSR) and Title V Federal Operating Permits. The two programs are substantially different both in intent and permit content.

NSR is a preconstruction permitting program authorized by the Texas Clean Air Act and Title I of the Federal Clean Air Act (FCAA). The processing of these permits is governed by 30 Texas Administrative Code (TAC) Chapter 116.111. The Title V Federal Operating Program is a federal program authorized under Title V of the FCAA that has been delegated to the state of Texas to administer and is governed by 30 TAC Chapter 122. The major differences between the two permitting programs are listed in the table below:

NSR Permit	Federal Operating Permit(FOP)
Issued Prior to new Construction or modification of an existing facility	For initial permit with application shield, can be issued after operation commences; significant revisions require approval prior to operation.
Authorizes air emissions	Codifies existing applicable requirements, does not authorize new emissions
Ensures issued permits are protective of the environment and human health by conducting a health effects review and that requirement for best available control technology (BACT) is implemented.	Applicable requirements listed in permit are used by the inspectors to ensure proper operation of the site as authorized. Ensures that adequate monitoring is in place to allow compliance determination with the FOP.
Up to two Public notices may be required. Opportunity for public comment and contested case hearings for some authorizations.	One public notice required. Opportunity for public comments. No contested case hearings.
Applies to all point source emissions in the state.	Applies to all major sources and some non-major sources identified by the EPA.
Applies to facilities: a portion of site or individual emission sources	One or multiple FOPs cover the entire site (consists of multiple facilities)
Permits include terms and conditions under which the applicant must construct and operate its various equipment and processes on a facility basis.	Permits include terms and conditions that specify the general operational requirements of the site; and also include codification of all applicable requirements for emission units at the site.
Opportunity for EPA review for Federal Prevention of Significant Deterioration (PSD) and Nonattainment (NA) permits for major sources.	Opportunity for EPA review, Affected states review, and a Public petition period for every FOP.
Permits have a table listing maximum emission limits for pollutants	Permit has an applicable requirements table and Periodic Monitoring (PM) / Compliance Assurance Monitoring (CAM) tables which document applicable monitoring requirements.
Permits can be altered or amended upon application by company. Permits must be issued before construction or modification of facilities can begin.	Permits can be revised through several revision processes, which provide for different levels of public notice and opportunity to comment. Changes that would be significant revisions require that a revised permit be issued before those changes can be operated.
NSR permits are issued independent of FOP requirements.	FOP are independent of NSR permits, but contain a list of all NSR permits incorporated by reference

New Source Review Requirements

Below is a list of the New Source Review (NSR) permits for the permitted area. These NSR permits are incorporated by reference into the operating permit and are enforceable under it. These permits can be found in the main TCEQ file room, located on the first floor of Building E, 12100 Park 35 Circle, Austin, Texas. The Public Education Program may be contacted at 1-800-687-4040 or the Air Permits Division (APD) may be contacted at 1-512-239-1250 for help with any question.

Additionally, the site contains emission units that are permitted by rule under the requirements of 30 TAC Chapter 106, Permits by Rule. The following table specifies the permits by rule that apply to the site. All current permits by rule are contained in Chapter 106. Outdated 30 TAC Chapter 106 permits by rule may be viewed at the following Web site:

www.tceq.texas.gov/permitting/air/permitbyrule/historical_rules/old106list/index106.html

Outdated Standard Exemption lists may be viewed at the following Web site:

www.tceq.texas.gov/permitting/air/permitbyrule/historical_rules/oldselist/se_index.html

The status of air permits and applications and a link to the Air Permits Remote Document Server is located at the following Web site:

www.tceq.texas.gov/permitting/air/nav/air_status_permits.html

Title 30 TAC Chapter 116 Permits, Special Permits, and Other Authorizations (Other Than Permits By Rule, PSD Permits, or NA Permits) for the Application Area.	
Authorization No.: 17910	Issuance Date: 12/18/2012
Authorization No.: 20222	Issuance Date: 06/08/2016
Authorization No.: 6091	Issuance Date: 08/04/2008
Permits By Rule (30 TAC Chapter 106) for the Application Area	
Number: 106.124	Version No./Date: 09/04/2000
Number: 106.261	Version No./Date: 11/01/2003
Number: 106.262	Version No./Date: 11/01/2003
Number: 106.371	Version No./Date: 09/04/2000
Number: 106.472	Version No./Date: 09/04/2000
Number: 106.473	Version No./Date: 09/04/2000

Emission Units and Emission Points

In air permitting terminology, any source capable of generating emissions (for example, an engine or a sandblasting area) is called an Emission Unit. For purposes of Title V, emission units are specifically listed in the operating permit when they have applicable requirements other than New Source Review (NSR), or when they are listed in the permit shield table.

The actual physical location where the emissions enter the atmosphere (for example, an engine stack or a sand-blasting yard) is called an emission point. For New Source Review preconstruction permitting purposes, every emission unit has an associated emission point. Emission limits are listed in an NSR permit, associated with an emission point. This list of emission points and emission limits per pollutant is commonly referred to as the "Maximum Allowable Emission Rate Table", or "MAERT" for short. Specifically, the MAERT lists the Emission Point Number (EPN) that identifies the emission point, followed immediately by the Source Name, identifying the emission unit that is the source of those emissions on this table.

Thus, by reference, an emission unit in a Title V operating permit is linked by reference number to an NSR authorization, and its related emission point.

Monitoring Sufficiency

Federal and state rules, 40 CFR § 70.6(a)(3)(i)(B) and 30 TAC § 122.142(c) respectively, require that each federal operating permit include additional monitoring for applicable requirements that lack periodic or instrumental monitoring (which may include recordkeeping that serves as monitoring) that yields reliable data from a

relevant time period that are representative of the emission unit's compliance with the applicable emission limitation or standard. Furthermore, the federal operating permit must include compliance assurance monitoring (CAM) requirements for emission sources that meet the applicability criteria of 40 CFR Part 64 in accordance with 40 CFR § 70.6(a)(3)(i)(A) and 30 TAC § 122.604(b).

With the exception of any emission units listed in the Periodic Monitoring or CAM Summaries in the FOP, the TCEQ Executive Director has determined that the permit contains sufficient monitoring, testing, recordkeeping, and reporting requirements that assure compliance with the applicable requirements. If applicable, each emission unit that requires additional monitoring in the form of periodic monitoring or CAM is described in further detail under the Rationale for CAM/PM Methods Selected section following this paragraph.

Rationale for Compliance Assurance Monitoring (CAM)/ Periodic Monitoring Methods Selected

Periodic Monitoring:

The Federal Clean Air Act requires that each federal operating permit include monitoring sufficient to assure compliance with the terms and conditions of the permit. Most of the emission limits and standards applicable to emission units at Title V sources include adequate monitoring to show that the units meet the limits and standards. For those requirements that do not include monitoring, or where the monitoring is not sufficient to assure compliance, the federal operating permit must include such monitoring for the emission units affected. The following emission units are subject to periodic monitoring requirements because the emission units are subject to an emission limitation or standard for an air pollutant (or surrogate thereof) in an applicable requirement that does not already require monitoring, or the monitoring for the applicable requirement is not sufficient to assure compliance:

Unit/Group/Process Information	
ID No.: GRP-TANKS1	
Control Device ID No.: T-412	Control Device Type: Wet Scrubber
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: 115B-1
Pollutant: VOC	Main Standard: § 115.112(b)(1)
Monitoring Information	
Indicator: Recirculation rate	
Minimum Frequency: Continuous	
Averaging Period: n/a	
Deviation Limit: The minimum water recirculation rate shall not be below 30 gpm.	
Basis of monitoring: The option to monitor the water recirculation rate is provided as a monitoring option because monitoring this parameter can indicate malfunctions in the liquid pumping equipment, blockage of pipes, or spray nozzles.	

Unit/Group/Process Information	
ID No.: GRP-TANKS1	
Control Device ID No.: T-412	Control Device Type: Wet Scrubber
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: 115B-1
Pollutant: VOC	Main Standard: § 115.112(b)(1)
Monitoring Information	
Indicator: Temperature	
Minimum Frequency: Continuous	
Averaging Period: n/a	
Deviation Limit: The maximum temperature of the recirculation water shall not exceed 110 degrees F.	
Basis of monitoring: Using engineering calculations, it has been determined that up to 98% VOC capture efficiency can be achieved. Temperature can be an indicator of proper operation of the water scrubber.	

Unit/Group/Process Information	
ID No.: GRP-TANKS1	
Control Device ID No.: T-412	Control Device Type: Wet Scrubber
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: 115B-1
Pollutant: VOC	Main Standard: § 115.112(b)(1)
Monitoring Information	
Indicator: Addition rate	
Minimum Frequency: Continuous	
Averaging Period: n/a	
Deviation Limit: The minimum fresh water addition rate shall not be below 0.80 gpm.	
Basis of monitoring: The option to monitor the fresh water addition rate is provided as a monitoring option because monitoring this parameter can indicate malfunctions in the liquid pumping equipment, blockage of pipes, or spray nozzles.	

Unit/Group/Process Information	
ID No.: GRP-TANKS1	
Control Device ID No.: N/A	Control Device Type: Vapor Collection System
Applicable Regulatory Requirement	
Name: 40 CFR Part 60, Subpart Kb	SOP Index No.: 60Kb-1
Pollutant: VOC	Main Standard: [G]§ 60.112b(a)(3)
Monitoring Information	
Indicator: VOC Concentration	
Minimum Frequency: Once per year	
Averaging Period: n/a	
Deviation Limit: Maximum VOC concentration shall not exceed 500 ppm.	
<p>Basis of monitoring:</p> <p>It is widely practiced and accepted to monitor the VOC concentration at the outlet of a control device by use of a portable analyzer with procedures such as EPA Test Method 25A or a VOC CEMS. The measured concentration along with stack flow rate or AP-42 factors and fuel consumption records may be used to demonstrate compliance with an underlying emission limit or standard. Outlet VOC concentration has been used as an indicator of VOC emissions in many federal rules including 40 CFR Part 60, Subpart III, 40 CFR Part 60, Subpart NNN, 40 CFR Part 60, Subpart RRR, 40 CFR Part 61, Subpart BB, 40 CFR Part 61, Subpart FF, 40 CFR Part 63, Subpart R, 40 CFR Part 63, Subpart DD, and 40 CFR Part 63, Subpart HH.</p>	

Unit/Group/Process Information	
ID No.: GRP-TANKS1	
Control Device ID No.: N/A	Control Device Type: Vapor Collection System
Applicable Regulatory Requirement	
Name: 40 CFR Part 60, Subpart Kb	SOP Index No.: 60Kb-1
Pollutant: VOC	Main Standard: [G]§ 60.112b(a)(3)
Monitoring Information	
Indicator: Visual Inspection	
Minimum Frequency: Once per year	
Averaging Period: n/a	
Deviation Limit: The presence of any defect shall be a deviation.	
<p>Basis of monitoring:</p> <p>It is widely practiced and accepted to use work practice as a monitoring option to demonstrate compliance. Preventive maintenance and visual inspections of control equipment, as recommended by the manufacturer, conducted by the owner or operator can ensure that the unit is operating properly. The work practice requirements prescribe that preventive maintenance and/or visual inspections be performed and a recorded in a log. This option assures that the owner or operator is adequately maintaining the control equipment.</p>	

Unit/Group/Process Information	
ID No.: GRP-TANKS1	
Control Device ID No.: T-412	Control Device Type: Wet Scrubber
Applicable Regulatory Requirement	
Name: 40 CFR Part 60, Subpart Kb	SOP Index No.: 60Kb-1
Pollutant: VOC	Main Standard: [G]§ 60.112b(a)(3)
Monitoring Information	
Indicator: Temperature	
Minimum Frequency: Continuous	
Averaging Period: n/a	
Deviation Limit: The maximum temperature of the recirculation water shall not exceed 110 degrees F.	
Basis of monitoring: Using engineering calculations, it has been determined that up to 98% VOC capture efficiency can be achieved. Temperature can be an indicator of proper operation of the water scrubber.	

Unit/Group/Process Information	
ID No.: GRP-TANKS1	
Control Device ID No.: T-412	Control Device Type: Wet Scrubber
Applicable Regulatory Requirement	
Name: 40 CFR Part 60, Subpart Kb	SOP Index No.: 60Kb-1
Pollutant: VOC	Main Standard: [G]§ 60.112b(a)(3)
Monitoring Information	
Indicator: Recirculation rate	
Minimum Frequency: Continuous	
Averaging Period: n/a	
Deviation Limit: The minimum water recirculation rate shall not be below 30 gpm.	
Basis of monitoring: The option to monitor the water recirculation rate is provided as a monitoring option because monitoring this parameter can indicate malfunctions in the liquid pumping equipment, blockage of pipes, or spray nozzles.	

Unit/Group/Process Information	
ID No.: GRP-TANKS1	
Control Device ID No.: T-412	Control Device Type: Wet Scrubber
Applicable Regulatory Requirement	
Name: 40 CFR Part 60, Subpart Kb	SOP Index No.: 60Kb-1
Pollutant: VOC	Main Standard: [G]§ 60.112b(a)(3)
Monitoring Information	
Indicator: Addition rate	
Minimum Frequency: Continuous	
Averaging Period: n/a	
Deviation Limit: The minimum fresh water addition rate shall not be below 0.80 gpm.	
Basis of monitoring: The option to monitor the fresh water addition rate is provided as a monitoring option because monitoring this parameter can indicate malfunctions in the liquid pumping equipment, blockage of pipes, or spray nozzles.	

Unit/Group/Process Information	
ID No.: GRP-TANKS2	
Control Device ID No.: T-412	Control Device Type: Wet Scrubber
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: 115B-1
Pollutant: VOC	Main Standard: § 115.112(b)(1)
Monitoring Information	
Indicator: Recirculation rate	
Minimum Frequency: Continuous	
Averaging Period: n/a	
Deviation Limit: The minimum water recirculation rate shall not be below 30 gpm.	
Basis of monitoring: The option to monitor the water recirculation rate is provided as a monitoring option because monitoring this parameter can indicate malfunctions in the liquid pumping equipment, blockage of pipes, or spray nozzles.	

Unit/Group/Process Information	
ID No.: GRP-TANKS2	
Control Device ID No.: T-412	Control Device Type: Wet Scrubber
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: 115B-1
Pollutant: VOC	Main Standard: § 115.112(b)(1)
Monitoring Information	
Indicator: Temperature	
Minimum Frequency: Continuous	
Averaging Period: n/a	
Deviation Limit: The maximum temperature of the recirculation water shall not exceed 110 degrees F.	
Basis of monitoring: Using engineering calculations, it has been determined that up to 98% VOC capture efficiency can be achieved. Temperature can be an indicator of proper operation of the water scrubber.	

Unit/Group/Process Information	
ID No.: GRP-TANKS2	
Control Device ID No.: T-412	Control Device Type: Wet Scrubber
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: 115B-1
Pollutant: VOC	Main Standard: § 115.112(b)(1)
Monitoring Information	
Indicator: Addition rate	
Minimum Frequency: Continuous	
Averaging Period: n/a	
Deviation Limit: The minimum fresh water addition rate shall not be below 0.80 gpm.	
Basis of monitoring: The option to monitor the fresh water addition rate is provided as a monitoring option because monitoring this parameter can indicate malfunctions in the liquid pumping equipment, blockage of pipes, or spray nozzles.	

Unit/Group/Process Information	
ID No.: GRP-TANKS3	
Control Device ID No.: T-412	Control Device Type: Wet Scrubber
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: 115B-1
Pollutant: VOC	Main Standard: § 115.112(b)(1)
Monitoring Information	
Indicator: Recirculation rate	
Minimum Frequency: Continuous	
Averaging Period: n/a	
Deviation Limit: The minimum water recirculation rate shall not be below 30 gpm.	
Basis of monitoring: The option to monitor the water recirculation rate is provided as a monitoring option because monitoring this parameter can indicate malfunctions in the liquid pumping equipment, blockage of pipes, or spray nozzles.	

Unit/Group/Process Information	
ID No.: GRP-TANKS3	
Control Device ID No.: T-412	Control Device Type: Wet Scrubber
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: 115B-1
Pollutant: VOC	Main Standard: § 115.112(b)(1)
Monitoring Information	
Indicator: Temperature	
Minimum Frequency: Continuous	
Averaging Period: n/a	
Deviation Limit: The maximum temperature of the recirculation water shall not exceed 110 degrees F.	
Basis of monitoring: Using engineering calculations, it has been determined that up to 98% VOC capture efficiency can be achieved. Temperature can be an indicator of proper operation of the water scrubber.	

Unit/Group/Process Information	
ID No.: GRP-TANKS3	
Control Device ID No.: T-412	Control Device Type: Wet Scrubber
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: 115B-1
Pollutant: VOC	Main Standard: § 115.112(b)(1)
Monitoring Information	
Indicator: Addition rate	
Minimum Frequency: Continuous	
Averaging Period: n/a	
Deviation Limit: The minimum fresh water addition rate shall not be below 0.80 gpm.	
Basis of monitoring: The option to monitor the fresh water addition rate is provided as a monitoring option because monitoring this parameter can indicate malfunctions in the liquid pumping equipment, blockage of pipes, or spray nozzles.	

Unit/Group/Process Information	
ID No.: GRP-TANKS4	
Control Device ID No.: N/A	Control Device Type: Unknown CD Type
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: 115B-1
Pollutant: VOC	Main Standard: § 115.112(b)(1)
Monitoring Information	
Indicator: Structural Integrity of the Pipe	
Minimum Frequency: Emptied and degassed	
Averaging Period: n/a	
Deviation Limit: It shall be considered and reported as a deviation if the repairs are not completed prior to refilling the storage vessel.	
Basis of monitoring: The periodic monitoring option provided for emission units using a submerged fill pipe is location of the submerged fill pipe and structural integrity of the pipe. The location and the integrity of the pipe ensure that loading operations are controlled to prevent splash fill and reduce generated vapors; therefore, less emissions are released to the atmosphere. This approach was included as an option by the EPA in the "Periodic Monitoring Technical Reference Document" (April 1999) to monitor VOC sources.	

Unit/Group/Process Information	
ID No.: GRP-TANKS4	
Control Device ID No.: N/A	Control Device Type: Unknown CD Type
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: 115B-1
Pollutant: VOC	Main Standard: § 115.112(b)(1)
Monitoring Information	
Indicator: Record of Tank Construction Specifications	
Minimum Frequency: n/a	
Averaging Period: n/a	
Deviation Limit: Keep a record of tank construction specifications.	
<p>Basis of monitoring:</p> <p>The periodic monitoring option provided for emission units using a submerged fill pipe is location of the submerged fill pipe and structural integrity of the pipe. The location and the integrity of the pipe ensure that loading operations are controlled to prevent splash fill and reduce generated vapors; therefore, less emissions are released to the atmosphere. This approach was included as an option by the EPA in the "Periodic Monitoring Technical Reference Document" (April 1999) to monitor VOC sources.</p>	

Unit/Group/Process Information	
ID No.: GRP-TANKS5	
Control Device ID No.: T-30020	Control Device Type: Wet Scrubber
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: 115B-1
Pollutant: VOC	Main Standard: § 115.112(b)(1)
Monitoring Information	
Indicator: Flow rate	
Minimum Frequency: Continuous	
Averaging Period: Hourly	
Deviation Limit: The minimum fresh water flow rate shall not be below 0.86 gpm.	
<p>Basis of monitoring:</p> <p>The option to monitor the fresh water flow rate is provided as a monitoring option because monitoring this parameter can indicate malfunctions in the liquid pumping equipment, blockage of pipes, or spray nozzles.</p>	

Unit/Group/Process Information	
ID No.: GRP-TANKS6	
Control Device ID No.: T-412	Control Device Type: Wet Scrubber
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: 115B-1
Pollutant: VOC	Main Standard: § 115.112(b)(1)
Monitoring Information	
Indicator: Recirculation rate	
Minimum Frequency: Continuous	
Averaging Period: n/a	
Deviation Limit: The minimum water recirculation rate shall not be below 30 gpm.	
Basis of monitoring: The option to monitor the water recirculation rate is provided as a monitoring option because monitoring this parameter can indicate malfunctions in the liquid pumping equipment, blockage of pipes, or spray nozzles.	

Unit/Group/Process Information	
ID No.: GRP-TANKS6	
Control Device ID No.: T-412	Control Device Type: Wet Scrubber
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: 115B-1
Pollutant: VOC	Main Standard: § 115.112(b)(1)
Monitoring Information	
Indicator: Temperature	
Minimum Frequency: Continuous	
Averaging Period: n/a	
Deviation Limit: The maximum temperature of the recirculation water shall not exceed 110 degrees F.	
Basis of monitoring: Using engineering calculations, it has been determined that up to 98% VOC capture efficiency can be achieved. Temperature can be an indicator of proper operation of the water scrubber.	

Unit/Group/Process Information	
ID No.: GRP-TANKS6	
Control Device ID No.: T-412	Control Device Type: Wet Scrubber
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: 115B-1
Pollutant: VOC	Main Standard: § 115.112(b)(1)
Monitoring Information	
Indicator: Addition rate	
Minimum Frequency: Continuous	
Averaging Period: n/a	
Deviation Limit: The minimum fresh water addition rate shall not be below 0.80 gpm.	
Basis of monitoring: The option to monitor the fresh water addition rate is provided as a monitoring option because monitoring this parameter can indicate malfunctions in the liquid pumping equipment, blockage of pipes, or spray nozzles.	

Unit/Group/Process Information	
ID No.: V-1688	
Control Device ID No.: N/A	Control Device Type: Unknown CD Type
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: 115B-1
Pollutant: VOC	Main Standard: § 115.112(b)(1)
Monitoring Information	
Indicator: Internal Floating Roof	
Minimum Frequency: annually	
Averaging Period: n/a	
Deviation Limit: Any defect found shall be considered a deviation.	
Basis of monitoring: The option to monitor VOC emissions by visually inspecting the external floating roof or the internal floating roof was included as an option by the EPA in the "Periodic Monitoring Technical Reference Document" (April 1999) to monitor VOC sources. If the external or internal floating roof is operating in accordance with its design it will meet its control efficiency. Visually inspecting the external floating roof or the internal floating roof is commonly required in federal and state rules, including: 40 CFR Part 60, Subpart Kb; 40 CFR Part 61, Subpart Y; and 30 TAC Chapter 115. Measuring and recording the accumulated area of gaps if the tank is equipped with primary seals is commonly required in federal and state rules, including: 40 CFR Part 60, Subpart Kb; 40 CFR Part 61, Subpart Y; 40 CFR 63 Subparts VV, DD, and MMM; and 30 TAC Chapter 115.	

Available Unit Attribute Forms

OP-UA1 - Miscellaneous and Generic Unit Attributes
OP-UA2 - Stationary Reciprocating Internal Combustion Engine Attributes
OP-UA3 - Storage Tank/Vessel Attributes
OP-UA4 - Loading/Unloading Operations Attributes
OP-UA5 - Process Heater/Furnace Attributes
OP-UA6 - Boiler/Steam Generator/Steam Generating Unit Attributes
OP-UA7 - Flare Attributes
OP-UA8 - Coal Preparation Plant Attributes
OP-UA9 - Nonmetallic Mineral Process Plant Attributes
OP-UA10 - Gas Sweetening/Sulfur Recovery Unit Attributes
OP-UA11 - Stationary Turbine Attributes
OP-UA12 - Fugitive Emission Unit Attributes
OP-UA13 - Industrial Process Cooling Tower Attributes
OP-UA14 - Water Separator Attributes
OP-UA15 - Emission Point/Stationary Vent/Distillation Operation/Process Vent Attributes
OP-UA16 - Solvent Degreasing Machine Attributes
OP-UA17 - Distillation Unit Attributes
OP-UA18 - Surface Coating Operations Attributes
OP-UA19 - Wastewater Unit Attributes
OP-UA20 - Asphalt Operations Attributes
OP-UA21 - Grain Elevator Attributes
OP-UA22 - Printing Attributes
OP-UA24 - Wool Fiberglass Insulation Manufacturing Plant Attributes
OP-UA25 - Synthetic Fiber Production Attributes
OP-UA26 - Electroplating and Anodizing Unit Attributes
OP-UA27 - Nitric Acid Manufacturing Attributes
OP-UA28 - Polymer Manufacturing Attributes
OP-UA29 - Glass Manufacturing Unit Attributes
OP-UA30 - Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mill Attributes
OP-UA31 - Lead Smelting Attributes
OP-UA32 - Copper and Zinc Smelting/Brass and Bronze Production Attributes
OP-UA33 - Metallic Mineral Processing Plant Attributes
OP-UA34 - Pharmaceutical Manufacturing
OP-UA35 - Incinerator Attributes
OP-UA36 - Steel Plant Unit Attributes
OP-UA37 - Basic Oxygen Process Furnace Unit Attributes
OP-UA38 - Lead-Acid Battery Manufacturing Plant Attributes
OP-UA39 - Sterilization Source Attributes
OP-UA40 - Ferroalloy Production Facility Attributes
OP-UA41 - Dry Cleaning Facility Attributes
OP-UA42 - Phosphate Fertilizer Manufacturing Attributes
OP-UA43 - Sulfuric Acid Production Attributes
OP-UA44 - Municipal Solid Waste Landfill/Waste Disposal Site Attributes
OP-UA45 - Surface Impoundment Attributes
OP-UA46 - Epoxy Resins and Non-Nylon Polyamides Production Attributes
OP-UA47 - Ship Building and Ship Repair Unit Attributes
OP-UA48 - Air Oxidation Unit Process Attributes
OP-UA49 - Vacuum-Producing System Attributes
OP-UA50 - Fluid Catalytic Cracking Unit Catalyst Regenerator/Fuel Gas Combustion Device/Claus Sulfur Recovery Plant Attributes
OP-UA51 - Dryer/Kiln/Oven Attributes
OP-UA52 - Closed Vent Systems and Control Devices
OP-UA53 - Beryllium Processing Attributes
OP-UA54 - Mercury Chlor-Alkali Cell Attributes

OP-UA55 - Transfer System Attributes
OP-UA56 - Vinyl Chloride Process Attributes
OP-UA57 - Cleaning/Depainting Operation Attributes
OP-UA58 - Treatment Process Attributes
OP-UA59 - Coke By-Product Recovery Plant Attributes
OP-UA60 - Chemical Manufacturing Process Unit Attributes
OP-UA61 - Pulp, Paper, or Paperboard Producing Process Attributes
OP-UA62 - Glycol Dehydration Unit Attributes
OP-UA63 - Vegetable Oil Production Attributes